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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/790,261

03/01/2004

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EXAMINER

LANG, AMY T

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/790,261	Applicant(s) SUZUKI, TAKAYUKI	
	Examiner AMY T. LANG	Art Unit 3731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/27/2004, 03/01/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been placed in the file.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 1-18** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 2, 3, 7, 13, 16, and 18 all recite a coil comprising a first, second, and third axis. The claims further recite wherein the second axis is larger than the third axis, which is unclear in context. Specifically, it is unclear as to how an axis, an imaginary line running through a body, can be larger than another axis. An axis is generally not defined in terms of size or length.

Claims 1, 2, 3, 7, 13, 16, and 18 all recite wherein when the wire comprises a circular cross-section, it has a lower torsional rigidity than that of a first reference wire. The claims also teach, as shown in Figure 5, that the cross-section of the coil is not circular but is instead rectangular in shape to give a larger length than width. Therefore, it is unclear as to how the wire comprises a circular cross-section but is still rectangular in shape to give a larger length.

Claims 1, 2, 3, 7, 13, 16, and 18 all recite wherein the wire comprises a circular cross-section with a diameter equal to "an outside diameter." However, it is the examiner's position that the term "outside diameter" is not properly defined and vague. How can the diameter of the cross-section be anything but equal to the outside diameter of the wire?

Claims 4-6, 8-12, 14-15, and 17 are dependent on claims 1, 2, 3, 7, 13, 16, and 18 and therefore are also rendered confusing and indefinite.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1-6, 16, and 18** are rejected under 35 U.S.C. 102(b) as being anticipated by Hirata et al. (US 6,540,670).

With regard to **claims 1, 3, and 16**, Hirata et al. (hereinafter Hirata) discloses a close-wound coil (21) comprising a single wire wound about a center axis (Figure 3B; column 13, lines 11-17). This axis is parallel to a center axis running along the longitudinal length of the coil. Hirata further discloses the coil as having a rectangular or elliptical cross-section (column 13, lines 28-44). These shapes give the coil a sturdier structure than a control wire with the same thickness (column 13, lines 34-44). Therefore, the coil would also comprise a second axis running perpendicular to the

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center axis and a third axis, parallel to the center axis so that it bisects the second axis.

Since the coil is rectangular or elliptical in shape, a length of the coil cross-section running through the second axis is larger than a width of the cross-section running through the third axis.

Since the coil disclosed by Hirata is taught as sturdier than a reference wire, it would also have a lower torsional rigidity than the reference wire (column 13, lines 34-44). Additionally, the coil of Hirata comprises substantially the same flexural rigidity of the reference wire, as best understood.

With regard to **claim 2**, since the wire of Hirata comprises a rectangular or elliptical shape, the second moment of area concerning the second axis is smaller than the second moment of area concerning the third axis.

With regard to **claims 4 and 5**, the coil of Hirata would also comprise substantially the same torsional rigidity as that of a second wire having a perfect circular cross-section with a predetermined diameter since Hirata discloses a rectangular or elliptical wire. Additionally, a predetermined diameter can vary greatly even though the wire is formed homogeneously.

With regard to **claim 6**, Hirata teaches the coil is inserted into the channel of an endoscope (column 1, lines 11-15).

With regard to **claim 18**, Hirata also discloses the wire as comprising a circular cross-section (column 13, lines 28-29).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. **Claims 1-9, 12, 16, and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouchi (US 6,443,909 B1) in view of Hirata (US 6,540,670).

With regard to **claims 1-6 and 16** Ouchi discloses a close wound coil (see entire document) wound spirally over a first axis (Figure 2). A center axis, parallel to the first axis, runs the length of the coil. As shown in Figure 2, the coil comprises a wound portion of the wire that is vertical to the center axis. The second axis bisects the center, first, and center axis. However, Ouch does not specifically disclose the coil comprising a larger length than width.

As discussed above, Hirata discloses a well known coil that comprises a rectangular or elliptical shape. This advantageously gives the coil a sturdier structure than a control wire with the same thickness (column 13, lines 34-44). Therefore, the coil

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would also comprise a second axis running perpendicular to the center axis and a third axis, parallel to the center axis so that it bisects the second axis. Since the coil is rectangular or elliptical in shape, a length of the coil cross-section running through the second axis is larger than a width of the cross-section running through the third axis.

Since Hirata discloses an advantageous coil structure, it would have been obvious at the time of the invention for the coil of Ouchi to also use a rectangular or elliptical wire as disclosed by Hirata to produce a sturdier coil structure.

With regard to **claim 7**, Ouchi discloses a medical treatment tool comprising the coil as described above, a rotation control section (30, 33), and a treatment section (10) (column 2, lines 30-31; column 4, lines 49-55).

With regard to **claim 8**, as shown in Figure 2, the treatment tool (11) is fixed to the distal end of the close wound coil.

With regard to **claims 9 and 17**, Ouchi discloses control wire (2) is connected to the treatment section to rotate the control section (column 3, lines 46-55). This control wire also overlaps the instantly claimed extension control.

With regard to **claims 6 and 12**, Ouchi teaches that the coil can be inserted into an endoscope (column 1, lines 43-42).

9. **Claims 1-10, 12-14, 16, and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US 6,824,548 B2) in view of Hirata (US 6,540,670).

With regard to **claims 1-6 and 16** Smith discloses a rectangular close wound coil (12) (see entire document) wound spirally over a first axis (Figure 2). The coil of Smith

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also comprises a center axis, a first axis, a second axis, and a third axis. The second axis bisects the center, first, and center axis. However, Smith does not specifically disclose the coil comprising a larger length than width.

As discussed above, Hirata discloses a well known coil that comprises a rectangular or elliptical shape so that the length of each cross-section is larger than the width. This advantageously gives the coil a sturdier structure than a control wire with the same thickness (column 13, lines 34-44). Therefore, the coil would also comprise a second axis running perpendicular to the center axis and a third axis, parallel to the center axis so that it bisects the second axis. Since the coil is rectangular or elliptical in shape, a length of the coil cross-section running through the second axis is larger than a width of the cross-section running through the third axis.

Since Hirata discloses an advantageous coil structure, it would have been obvious at the time of the invention for the coil of Smith to also use a rectangular or elliptical where the length of a cross-section is larger than a width as disclosed by Hirata to produce a sturdier coil structure.

With regard to **claim 7**, Smith discloses a medical treatment tool comprising the coil as described above, a rotation control section (62), and a treatment section (13) (column 1, lines 17-25; column 9, lines 12-21).

With regard to **claims 13 and 15**, as shown in Figure 2, the coil is inserted into mantle tube (150).

With regard to **claim 8**, as shown in Figure 1, the treatment tool (13) is fixed to the distal end of the close wound coil.

With regard to **claims 9 and 17**, Smith discloses control wire (60) is connected to the treatment section to rotate the control section (column 5, lines 58-62). This control wire also overlaps the instantly claimed extension control.

With regard to **claims 6, 12, and 14**, Smith teaches that the coil can be inserted into an endoscope (column 7, line 66 through column 8, lines 4).

With regard to **claim 10**, the treatment section further comprises an end effector that distally advances clips (column 5, lines 17-20).

10. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US 6,824,548 B2) in view of Hirata (US 6,540,670) as applied to claim 10 above, and further in view of Ouchi (US 6,443,909 B1).

As discussed in paragraph above, Smith discloses a medical treatment tool comprising a coil. However, Smith does not specifically disclose the use of more than one coil.

Ouchi, as discussed above, discloses a similar medical treatment tool comprising a coil. Ouchi teaches that a medical device comprising two coils can advantageously respond to rotational movement without twisting (column 3, lines 1-7). Therefore, it would have been obvious to one of ordinary skill at the time of the invention for the medical device of Smith to comprise two coils for the advantages taught by Ouchi.

Response to Arguments

11. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMY T. LANG whose telephone number is (571)272-9057. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Todd Manahan can be reached on 571-272-4713. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

12/01/2008

/Amy T Lang/

Examiner, Art Unit 3731

/Todd E Manahan/

Supervisory Patent Examiner, Art Unit 3731